

# INDEX

## RUBBER CHEMISTRY AND TECHNOLOGY

### VOLUME XII, 1939

#### AUTHORS

	Page
ANDÔ, T. <i>See</i> Minatoya, S.	
BACON, R. G. R., AND FARMER, E. H. Interaction of Maleic Anhydride with Rubber.....	200
BADUM, E. Permeability of Organic Substances to Water.....	74
BAKER, H. O. Preparation and Properties of Halogen Derivatives of Rubber from Latex.....	545
BAXTER, J. P., AND MOORE, J. G. Properties and Uses of Chlorinated Rubber.....	82
BEKKEDAH, N. Application of Thermodynamics to the Chemistry of Rubber.....	150
<i>See also</i> Wood, Lawrence A.	
BLAKE, J. T., AND BRUCE, P. L. Effect of Light on Unvulcanized Rubber.....	181
BOBINSKA, J. <i>See</i> Sagajko, M.	
BOCQUET, M. Problem of Making Uniform Crude Rubber and Its Standardization.....	1
BOISSONAS, CHARLES G. Specific Heat of Strained Rubber.....	794
<i>See also</i> Meyer, Kurt H.	
BRAZIER, S. A., HOLLAND-BOWYER, W., AND MELLERS, C. E. Investigation of the Performance of Flat and V-Type Transmission Belts.....	618
BROWN, J. R., AND HAUSER, E. A. Chemical Structure of Vulcanized Rubber.....	43
BRUCE, P. L. <i>See</i> Blake, J. T.	
BUSSE, W. F., AND CUNNINGHAM, E. N. Mastication of Rubber. A Study of Some of the Oxidation Processes Involved.....	163
CAJELLI, GIAMPIETRO. Chromatography of Rubber Solutions.....	762
CARPENTER, A. S. <i>See</i> Twiss, D. F.	
CARRINGTON, J. H. Testing of Rubber at Low Temperatures.....	365
CAYLA, V. Variability of Raw Rubber.....	420
CLARK, GEORGE L., GROSS, SIEGFRIED T., AND SMITH, W. HAROLD. X-Ray Diffraction Patterns of Crystalline Sol Rubber Prepared from Ethereal Solution.....	482
CHURCH, H. F., AND DAYNES, H. A. Properties of Hard Rubber. VII. Measurement of Plastic Flow as Affected by Temperature.....	826
CLEWE, C. J. B. Structure of Rubber.....	119
CRAMER, H. I., SJOTHUN, I. J., AND ONEACRE, L. E. Direct Determination of Oxygen in Rubber. Adaptation of the ter Meulen Method to Rubber and Its Application to the Study of Aging..	260
CUNNINGHAM, E. N. <i>See</i> Busse, W. F.	
CUTHBERTSON, G. R. <i>See</i> Gibbons, W. A.	
DAVIES, B. L. Strength of Vulcanized Rubber.....	509
DAWSON, T. R. Rubber Terminology.....	441
DAYNES, H. A. Some Practical Aspects of the Theory of Diffusion of Water through Rubber.....	535
<i>Theory of Water Absorption by Rubber.....</i>	
<i>See</i> Church, H. F.	
DEKKER, P. <i>See</i> Rossem, A. van.	
DE VRIES, O. Tackiness and Consistency of Rubber after Treatment by Alkali.....	176
DINSMORE, R. P. <i>See</i> Gehman, S. D.	
DOEDE, C. M. Relationship between the Critical Oxidation Potentials and Antioxidant Activities of Rubber Antioxidants.....	287
DOSTAL, H. Statistical Theory of the Elasticity of Rubber.....	56
DOW, R. B. Inhibition of Crystallization of Rubber by High Pressure.....	496
DUFRAISSE, CH., AND LE BRAS, JEAN. Influence of Vulcanization on the Oxidizability of Rubber. Vulcanizing Agents Other than Sulfur.....	805
Ultra-rapid Testing of Rubber. The Testing of Its Oxidizability in One-Quarter of an Hour....	568
ECK, LEO. Contribution to the History of Latex.....	908
FARMER, E. H. <i>See</i> Bacon, R. G. R.	
FIELD, J. E. <i>See</i> Gehman, S. D.	
FISHER, HARRY L. Nomenclature of Synthetic Rubbers.....	900
GEHMAN, S. D., AND FIELD, J. E. X-Ray Investigation of Crystallinity in Rubber.....	706
—, AND DINSMORE, R. P. X-Ray Study of Rubber Hydrochloride.....	210
GERKE, R. H., <i>et al.</i> Abridged Summary of Reports of the Crude Rubber Committee of The Division of Rubber Chemistry of the American Chemical Society.....	683
GERKE, R. H. <i>See</i> Gibbons, W. A.	
GIBBONS, W. A., GERKE, R. H., AND CUTHBERTSON, G. R. T-50 Test for State of Vulcanization, II.	576
GRAFFE, LUCIEN. Machine for the Systematic Testing of Rubber Subjected to Repeated Flexings..	582
GROSS, SIEGFRIED T. <i>See</i> Clark, George L.	
HAEFELE, J. W., AND MCCOLM, E. M. Chemistry of Natural Rubber.....	760
HAUK, V., AND NEUMANN, W. Dependence of the Stress on the Temperature of Rubber Elongated to a Constant Degree.....	520
Isothermal and Adiabatic Stress-Strain Curves of Vulcanized Rubber.....	64
A Time Effect in the Rapid Elongation of Rubber.....	518
HAUSER, E. A. <i>See</i> Brown, J. R.	
HERRMANN, D. B. <i>See</i> Kemp, A. R.	

	Page
HEYWOOD, M. M. Influence on Final Product of Fast and Slow Vulcanizing Rubbers.....	423
HOEKSTRA, H. A., AND HOEKSTRA, J. Apparatus for Measuring Compressibility and Permanent Set of Rubber and Rubber-Like Materials at Various Temperatures.....	861
HOEKSTRA, J. High-speed Apparatus for Determination of Plasticity in Rubber Works, and Some Results.....	434
See Hoekstra, H. A.	
HOLLAND-BOWYER, W. See Brazier, S. A.	
HOUWINK, R. A few Corrections of Statistical Theories of the High Elasticity of Rubber.....	498
JEANNERAT, JEAN. See Meyer, Kurt H.	
JONES, F. B., AND PEARCE, W. H. Use of the Pendulum in Rubber Testing.....	403
JORDAN, H. F. KOH-Number Test and Its Application to the Compounding of Zinc Oxide in Rubber Latex.....	590
See also Shriver, G. E.	
KEDROV, B. M. Formula for Determining the Viscosity of Latex.....	112
KEMP, A. R. Composition and Colloidal Properties of Balata Latex.....	470
—, AND HERRMANN, D. B. Dielectric Measurements in the Study of Carbon Black and Zinc Oxide Dispersion in Rubber.....	317
KIRCHHOFF, F. Sensitive Detection of Organically Combined Bromine.....	103
KIRSCH, W. See Thiessen, P. A.	
KOSTEN, C. W. Static and Dynamic Properties of Rubber under Compression.....	381
KOSTEN, C. W., AND ZWIKKER, C. Properties of Sponge Rubber as a Material for Damping Vibration and Shock.....	105
LE BRAS, JEAN. See Dufraisse, Ch.	
MCCOLM, E. M. See Haefele, J. W.	
MARK, H. Rubber Elasticity and Gas Elasticity.....	124
—, AND MEYER, KURT H. Crystal Structures of Cellulose and of Rubber.....	734
MARTY, A. Improvements in Methods for the Rapid Analysis of Rubber.....	609
MARZETTI, B. An Accelerated Aging Test at Room Temperature.....	283
MELLERS, C. E. See Brazier, S. A.	
MEYER, KURT H. Researches on Rubber and Rubber-like Substances.....	31
See also Mark, H.	
—, AND JEANNERAT, JEAN. Properties of Polymers in Solution. X. Ultrafiltration of Rubber Solutions.....	774
—, WOLFF, EBERHARD AND BOISSONAS, CH. G. Heat of Dilution in the System Rubber-Toluene.	504
MILLER, C. J. See Stevens, H. P.	
MILLIGAN, A. G. AND SHAW, J. E. Measurement of the Absorption of Oxygen by Vulcanized Rubber in Air.....	261
MINATOYA, S. AND ANDO, T. Proposed New Method of Retarding the Aging of Vulcanized Rubber by Means of Peroxides and Nitro Compounds.....	292
MOORE, J. G. See Baxter, J. P.	
MORGAN, L. B., AND NAUNTON, W. J. S. Mechanism of Oxidation of Rubber and Its Bearing on Accelerated Aging Tests. I. and II.....	235
MURPHY, E. A. Testing and Control of Latex Supplies.....	885
NAUNTON, W. J. S., AND WARING, J. R. S. Fatigue in Rubber. II.....	332
III.....	845
See also Morgan, L. B.	
NEUMANN, W. See Hauk, V.	
NOBLE, R. J. Purified Latex and Rubber.....	672
OKITA, T. Influence of Copper on Rubber. VII. Effects of Metallic Salts on the Evolution of Hydrogen Sulfide.....	78
Studies on Deproteinized Rubber. V. Effects of Several Proteins.....	71
ONEACRE, L. E. See Cramer, H. I.	
PARK, CHULLCHAL. Crystallization of Crude Rubber.....	778
PEARCE, W. H. See Jones, F. B.	
POPHAM, F. J. W. See Stevens, H. P.	
RHODES, EDGAR. Variation in the Composition and Properties of Fresh Latex and Subsequent Changes on Ammoniation.....	646
Viscosity of Preserved and Concentrated Latex:	
I.....	655
II.....	665
ROBERTS, KENNETH C. Chemistry of Natural Rubber. III. The Effect of Ammoniation on the Latex of <i>Hevea Brasiliensis</i> .....	465
ROELIG, H. Dynamic Evaluation of Damping and Durability of Rubber Compounds.....	394
ROHDE, E. Contribution to the Characterization of the Plastic-Elastic State.....	799
ROSSEM, A. VAN, AND DEKKER, P. Oxidation Products of Rubber.....	225
ROWE, J. W. See Stevens, H. P.	
SAGAJLLO, M., BOBINSKA, J., AND SAGANOWSKI, H. Behavior of Rubber at Low Temperatures.....	344
SAGANOWSKI, H. See Sagajllo, M.	
SAGER, THERON P., AND SUCHER, MAX. Permeability of Neoprene to Gases.....	875
SAUTER, ERWIN. Highly Polymeric Compounds. CLXIV. Unit Cell Diagrams and the Microstructure of "Single Crystals" of Rubber. Determination of the Lattice of Macromolecules of Rubber According to New X-Ray Methods.....	719
SAYLOR, CHARLES PROFFER. See Smith, W. Harold.	
SCOTT, J. R. Oil-resisting Rubber. XII. Vulcanized Rubbers Containing Organic Accelerators....	842
SHAW, J. E. See Milligan, A. G.	
SHRIVER, G. E., AND JORDAN, H. F. Multipore. A Thin Perforate Latex Sheet.....	867

# AUTHOR INDEX

911

	Page
SJOTHUN, I. J. <i>See</i> Cramer, H. I.	
SMITH, W. HAROLD, AND SATLOR, CHARLES PROFFER. Optical and Dimensional Changes Which Accompany the Freezing and Melting of Hevea Rubber.....	18
—, AND WING, HENRY J. Behavior of Rubber Hydrocarbon in a Molecular Still.....	789
<i>See also</i> Clark, George L.	
SNYDER, J. W. <i>See</i> Wiegand, W. B.	
SOMERVILLE, A. A. Some Properties of Two Vulcanized Pure Gum Compounds at Low Temperatures.....	370
STAMBERGER, PAUL. Spontaneous Coagulation of Rubber Latex.....	469
STAUDINGER, H. Soluble and Insoluble Rubber.....	117
STEVENS, HENRY P. <i>Ficus Elastica</i> and <i>Castilloa</i> Latices.....	688
—, AND MILLER, C. J. Cyclized Rubber, Particularly Halide Transformations.....	556
—, AND POPHAM, F. J. W. Vulcanization of Oxidized Rubbers.....	541
—, AND ROWE, J. W. Note on Extraction of Raw Rubber with Acetone.....	604
Properties of Rubber Prepared from Dialyzed Latex.....	695
SUCHER, MAX. <i>See</i> Sager, Theron P.	
TANAKA, KENZO. Examination of Thin Rubber Films by Electron Diffraction.....	485
THIESSEN, P. A., AND KIRSCH, W. Crystallization of Rubber by Pressure.....	12
—, AND WITTTADT, W. Forced and Spontaneous Changes in the Arrangement of the Molecules in Stretched Rubber.....	736
TRAPEZNIKOW, A. A. Mechanical Properties of "Two-Dimensional" Rubber. The Micellar Structure of Rubber.....	755
TULLEY, W. F. Frosting of Vulcanized Rubber.....	886
TWISS, D. F., AND CARPENTER, A. S. Composition and Characteristics of the Rubber in <i>Hevea</i> Latex.....	448
VAN DER WYK, A. J. A. Internal Friction of Vulcanized Rubber.....	401
VAN ROSSEM, A. <i>See</i> Rossem, A. van.	
WARING, J. R. S. <i>See</i> Naunton, W. J. S.	
WIEGAND, W. B., AND SNYDER, J. W. Rubber-Vulcanizing Properties of Colloidal Carbons.....	298
WILLIAMS, I. Distribution of Combined Sulfur in Vulcanized Rubber and Its Bearing on the Sulfide Linkage Theory of Vulcanization.....	191
WILLOTT, W. H. Color Measurement and Its Application in the Rubber Industry.....	611
WING, HENRY J. <i>See</i> Smith, W. Harold.	
WITTTADT, W. External Influence and the Internal State of Rubber.....	488
WOLFF, EBERHARD. <i>See</i> Meyer, Kurt H.	
WOOD, L. A. Values of the Physical Constants of Rubber.....	130
WOOD, LAWRENCE A., AND BEKKEDAH, NORMAN. An Improved Wiegand Rubber Pendulum.....	529
ZWIKKER, C. <i>See</i> Kosten, C. W.	

# SUBJECTS

Abridged Summary of Reports of the Crude Rubber Committee of The Division of Rubber Chemistry of the American Chemical Society.....	633
Absorption, Water, by Rubber.....	532
Accelerated Aging Test at Room Temperature.....	283
Accelerators, Organic.....	842
Acetone Extraction with Raw Rubber.....	604
Adiabatic Stress-strain Curves of Vulcanized Rubber.....	64
A Few Corrections of Statistical Theories of the High Elasticity of Rubber.....	498
Aging, Accelerated, Test at Room Temperature.....	283
Tests.....	235
Application of ter Meulen Method to Study of.....	269
of Vulcanized Rubber, Retarding.....	292
Alkali, Treatment by.....	176
Ammoniation Effect on Latex of <i>Hevea Brasiliensis</i> .....	465
of Fresh Latex.....	646
Analysis, Rapid, Improvements in Method.....	609
Antioxidant Activities of Rubber Antioxidants.....	287
Antioxidants, Relationship Between Oxidation Potentials and Antioxidant Activities of Rubber.....	287
Apparatus for Determination of Plasticity in Rubber Works.....	434
Measuring Compressibility and Permanent Set of Rubber and Rubber-like Materials at Various Temperatures.....	861
Application of Thermodynamics to the Chemistry of Rubber.....	150
Balata Latex, Colloidal Properties of.....	470
Behavior of Rubber at Low Temperatures.....	344
Hydrocarbon in a Molecular Still.....	789
Belts, Transmission.....	618
Bromine, Detection of Organically Combined.....	103
Carbon Black, Dielectric Measurements in Study of.....	317
Carbons, Colloidal, Rubber-Vulcanizing Properties of.....	298
<i>Castilloa</i> Latices.....	688
Cellulose, Crystal Structures of.....	734
Chemical Structure of Vulcanized Rubber.....	43
Chemistry of Natural Rubber:	
Part III. The Effect of Ammoniation on.....	760
the Latex of <i>Hevea Brasiliensis</i> .....	465
Chemistry of Rubber, Application of Thermodynamics to.....	150
Chlorinated Rubber.....	82
Chromatography of Rubber Solutions.....	762
Coagulation of Rubber Latex.....	469

	Page
Colloidal Carbons, Rubber-Vulcanizing Properties of.....	298
Properties of Balata Latex.....	470
Color Measurement and Its Application in the Rubber Industry.....	611
Composition and Characteristics of the Rubber in <i>Hevea</i> Latex.....	448
Colloidal Properties of Balata Latex.....	470
Compressibility and Permanent Set of Rubber and Rubber-Like Materials.....	861
Compression, Dynamic Properties of Rubber under.....	381
Contribution to the Characterization of the Plastic-Elastic State.....	799
History of Latex.....	908
Control of Latex Supplies, Testing and.....	885
Copper, Influence on Rubber.....	78
Crude Rubber, Crystallization of.....	778
Problem of Making Uniform.....	1
Crystals and Fused Phase in Stretched Rubber.....	736
Crystal Structures of Cellulose and of Rubber.....	734
Crystalline Sol Rubber, X-Ray Diffraction Patterns of.....	482
Crystallinity, X-Ray Investigation of.....	706
Crystallization, Inhibition by High Pressure.....	496
of Crude Rubber.....	778
Rubber by Pressure.....	12
Cyclized Rubber, Particularly Halide Transformations.....	556
Damping, Dynamic Evaluation of.....	394
Dependence of the Stress on the Temperature of Rubber Elongated to a Constant Degree.....	520
Deproteinized Rubber, Effects of Several Proteins.....	71
Derivatives, Halogen.....	545
Determination, of Oxygen in Rubber, Direct.....	269
Dialyzed Latex.....	695
Dielectric Measurements in the Study of Carbon Black and Zinc Oxide Dispersion in Rubber.....	317
Diffraction Patterns, X-Ray.....	482
Dilution in the System: Rubber-Toluene, Heat of.....	504
Direct Determination of Oxygen in Rubber. Adaptation of the ter Meulen Method to Rubber and Its Application to the Study of Aging.....	269
Dispersion, in Rubber, Zinc Oxide.....	317
Distribution of Combined Sulfur in Vulcanized Rubber and Its Bearing on the Sulfide Linkage Theory of Vulcanization.....	191
Durability of Rubber Compounds.....	394
Dynamic Evaluation of Damping and Durability of Rubber Compounds.....	394
Properties of Rubber under Compression.....	381
Effect of Light on Unvulcanized Rubber.....	181
Elasticity of Rubber.....	56
Rubber and Gas.....	124
Electron Diffraction, Examination of Thin Rubber Films by.....	485
Elongation, Rapid.....	518
Examination of Thin Rubber Films by Electron Diffraction.....	485
External Influence and the Internal State of Rubber.....	488
Extraction of Raw Rubber with Acetone.....	604
Fast and Slow Vulcanizing Rubbers.....	423
Fatigue in Rubber. II.....332; III.....	845
<i>Ficus Elastica</i> and <i>Castilloa</i> Latices.....	688
Films, Examination by Electron Diffraction of, Thin Rubber.....	485
Flexings, Machine for Testing of Rubber subjected to Repeated.....	582
Forced and Spontaneous Change in the Arrangement of the Molecule in Stretched Rubber.....	736
Formula for Determining the Viscosity of Latex.....	112
Freezing and Melting of <i>Hevea</i> Rubber.....	18
Friction, Internal, of Vulcanized Rubber.....	401
Frosting of Vulcanized Rubber.....	886
Gases, Permeability of Neoprene to.....	875
Halide Transformations, Cyclized Rubber.....	556
Halogen Derivatives of Rubber from Latex.....	545
Hard Rubber, Properties of. VII.....	826
Heat of Dilution in the System: Rubber-Toluene.....	504
Highly Polymeric Compounds. CLXIV. Unit Cell Diagrams and the Microstructure of Single Crystals of Rubber. Determination of the Lattice of Macromolecules of Rubber According to New X-Ray Methods.....	719
High-speed Apparatus for Determination of Plasticity in Rubber Works and Some Results.....	434
History of Latex.....	908
Hydrocarbon, Rubber, Behavior in a Molecular Still.....	789
Hydrochloride, X-Ray Study of Rubber.....	210
Hydrogen Sulfide, Effects on Metallic Salts on, Evolution of.....	78
Improved Wiegand Rubber Pendulum.....	529
Improvements in Methods for the Rapid Analysis of Rubber.....	609
Influence of Copper on Rubber. VII. Effects of Metallic Salts on the Evolution of Hydrogen Sulfide.....	78
Vulcanization on the Oxidizability of Rubber. Vulcanizing Agents Other Than Sulfur.....	805
on Final Product of Fast and Slow Vulcanizing Rubbers.....	423
Inhibition of Crystallization of Rubber by High Pressure.....	496
Insoluble Rubber, Soluble and.....	117
Interaction of Maleic Anhydride with Rubber.....	200
Internal Friction of Vulcanized Rubber.....	401
State of Rubber.....	488
Investigation of the Performance of Flat and V-Type Transmission Belts.....	618
Isothermal and Adiabatic Stress-Strain Curves of Vulcanized Rubber.....	64



# SUBJECT INDEX

913

	Page
KOH-Number Test and Its Application to the Compounding of Zinc Oxide in Rubber Latex.....	590
Latex, Colloidal Properties of Balata.....	470
Composition and Characteristics of Rubber in <i>Hevea</i> .....	448
of Fresh.....	695
Dialyzed.....	112
Formula for Determining Viscosity of.....	545
Halogen Derivatives of.....	908
History of.....	465
of <i>Hevea Brasiliensis</i> , Effect of Ammoniation on.....	655
Preserved and Concentrated, Viscosity of.....	672
Purified.....	867
Sheet, Multipore—A Thin Perforate.....	469
Spontaneous Coagulation of.....	885
Supplies, Testing and Control of.....	655
Viscosity of Preserved and Concentrated.....	590
Zinc Oxide in Rubber.....	688
Latices, <i>Castilloa</i> .....	719
Lattice of Macromolecules, Determination of.....	181
Light, Effect on Unvulcanized Rubber.....	365
Low Temperature Testing of Rubber.....	344
Low Temperatures, Behavior of Rubber at.....	370
Two Vulcanized Pure Gum Compounds.....	582
Machine for the Systematic Testing of Rubber Subjected to Repeated Flexings.....	719
Macromolecules, Lattice of.....	200
Maleic Anhydride, Interaction with Rubber of.....	163
Mastication of Rubber. A Study of Some of the Oxidation Processes Involved.....	261
Measurement of the Absorption of Oxygen by Vulcanized Rubber in Air.....	235
Mechanism of Oxidation of Rubber and Its Bearing on Accelerated Aging Tests. I. and II.....	755
Mechanical Properties of "Two-Dimensional" Rubber. The Micellar Structure of Rubber.....	18
Melting of <i>Hevea</i> Rubber.....	78
Metallic Salts, Effect on Evolution of Hydrogen Sulfide.....	755
Micellar Structure of Rubber.....	719
Microstructure of Single Crystals.....	736
Molecules in Stretched Rubber.....	867
Multipore. A Thin Perforate Latex Sheet.....	
Neoprene. Permeability to Gases.....	875
Nitro Compounds, Retarding Aging of Vulcanized Rubber by.....	292
Nomenclature of Synthetic Rubbers.....	900
Oil-resisting Rubber. XII. Vulcanized Rubbers Containing Organic Accelerators.....	842
Optical and Dimensional Changes Which Accompany the Freezing and Melting of <i>Hevea</i> Rubber..	18
Organic Accelerators in Vulcanized Rubbers.....	842
Oxidation, Mechanism of.....	235
Potentials, Critical.....	287
Processes Involved in Mastication of Rubber.....	163
Products of Rubber.....	225
Oxidizability, Testing of, in 1-Hour.....	568
Oxidized Rubbers, Vulcanization of.....	541
Oxygen in Rubber, Direct Determination of.....	269
Measurement of Absorption by Vulcanized Rubber in Air.....	261
Pendulum in Rubber Testing.....	408
Rubber, an Improved Wiegand.....	529
Perforate Latex Sheet, Multipore.....	867
Permanent Set of Rubber and Rubber-like Materials.....	861
Permeability of Neoprene to Gases.....	875
Organic Substances to Water.....	74
Peroxides and Nitro Compounds, Retarding Aging of Vulcanized Rubber by.....	292
Physical Constants of Rubber.....	130
Plastic-elastic State.....	799
Flow, Measurement of.....	826
Plasticity, Apparatus for Determination of.....	434
Polymeric Compounds.....	719
Polymers in Solution, Properties of.....	774
Preparation and Properties of Halogen Derivatives of Rubber from Latex.....	545
Pressure, Crystallization of Rubber by.....	12
High, Inhibition of Crystallization by.....	496
Problem of Making Uniform Crude Rubber and Its Standardization.....	1
Properties and Uses of Chlorinated Rubber.....	82
of Hard Rubber. VII. Measurement of Plastic Flow as Affected by Temperature.....	826
of Polymers in Solution. X. Ultrafiltration of Rubber Solutions.....	774
of Rubber Prepared from Dialyzed Latex.....	695
of Sponge Rubber as a Material for Damping Vibration and Shock.....	105
Proposed New Method of Retarding the Aging of Vulcanized Rubber by Means of Peroxides and Nitro Compounds.....	292
Proteins, Studies on Deproteinized Rubber.....	71
Purified Latex and Rubber.....	672
Rapid Elongation of Rubber.....	518
Raw Rubber, Extraction with Acetone.....	604
Variability of.....	420
Relationship between the Critical Oxidation Potentials and Antioxidant Activities of Rubber Anti-oxidants.....	287
Reports of Crude Rubber Committee of the Division of Rubber Chemistry of the American Chemical Society.....	683

	Page
Researches on Rubber and Rubber-like Substances.....	31
Rubber Elasticity and Gas Elasticity.....	124
Hydrocarbon in a Molecular Still.....	789
-like Materials at Various Temperatures.....	861
Substances, Researches on.....	31
Terminology.....	441
-vulcanizing Properties of Colloidal Carbons.....	298
Sensitive Detection of Organically Combined Bromine.....	108
Shock, Damping Vibration and.....	105
Slow Vulcanizing Rubbers.....	423
Sol Rubber, X-Ray Diffraction Patterns of.....	482
Soluble and Insoluble Rubber.....	117
Solutions, Chromatography of Rubber.....	762
Ultrafiltration of Rubber.....	774
Some Practical Aspects of the Theory of Diffusion of Water through Rubber.....	535
Properties of Two Vulcanized Pure Gum Compounds at Low Temperatures.....	370
Specific Heat of Strained Rubber.....	794
Sponge Rubber for Damping Vibration and Shock.....	105
Spontaneous Coagulation of Rubber Latex.....	469
Standardization of Crude Rubber.....	1
State of Vulcanization, T-50 Test for. Part II.....	576
Static and Dynamic Properties of Rubber under Compression.....	381
Statistical Theories of High Elasticity of Rubber.....	498
Statistical Theory of the Elasticity of Rubber.....	56
Strained Rubber, Specific Heat of.....	794
Strength of Vulcanized Rubber.....	509
Stress, Dependence on Temperature.....	520
Stress-Strain Curves of Vulcanized Rubber, Isothermal and Adiabatic.....	64
Stretched Rubber, Molecules in.....	736
Structure of Rubber.....	119
Micellar.....	755
Vulcanized Rubber, Chemical.....	43
Studies on Deproteinized Rubber. V. Effects of Several Proteins.....	71
Sulfide Linkage Theory of Vulcanization.....	191
Sulfur, Combined, in Vulcanized Rubber.....	191
Synthetic Rubbers, Nomenclature of.....	900
System: Rubber-Toluene.....	504
T-50 Test for State of Vulcanization. II.....	576
Tackiness and Consistency of Rubber after Treatment by Alkali.....	176
Temperature, Dependence of Stress on.....	520
Terminology, Rubber.....	441
Testing and Control of Latex Supplies.....	885
of Rubber at Low Temperatures.....	365
of Rubber Flexed Repeatedly, Machine for.....	582
of Rubber, Ultra-rapid.....	568
Use of Pendulum in Rubber.....	403
Theory of Diffusion of Water through Rubber.....	535
Water Absorption by Rubber.....	532
of Elasticity of Rubber, Statistical.....	56
of Vulcanization, Sulfide Linkage.....	191
Thermodynamics, Application to Chemistry of Rubber.....	150
Time Effect in the Rapid Elongation of Rubber.....	518
Toluene, Heat of Dilution in the System: Rubber.....	504
Transmission Belts.....	618
Two-Dimensional Rubber.....	755
Ultrafiltration of Rubber Solns.....	774
Ultra-rapid Testing of Rubber. The Testing of Its Oxidizability in One-quarter of an Hour.....	568
Uniform Crude Rubber.....	1
Use of the Pendulum in Rubber Testing.....	403
Values of the Physical Constants of Rubber.....	130
Variability of Raw Rubber.....	420
Variation in the Composition and Properties of Fresh Latex and Subsequent Changes on Ammonia- tion.....	646
Vibration and Shock, Sponge Rubber as a Material for.....	105
Viscosity of Latex, Formula for Determining.....	112
Preserved and Concentrated Latex. I. and II.....	655
Vulcanization, Influence on Oxidizability.....	805
of Oxidized Rubbers.....	541
Vulcanized Rubber, Frosting of.....	836
Vulcanizing Agents Other Than Sulfur.....	805
Water Absorption by Rubber.....	532
Diffusion through Rubber, Theory of.....	535
Permeability of Organic Substances to.....	74
Wiegand, Rubber Pendulum, Improved.....	529
X-Ray Diffraction Patterns of Crystalline Sol Rubber Prepared from Ethereal Solution.....	482
Investigation of Crystallinity of Rubber.....	706
Study of Rubber Hydrochloride.....	210
Zinc Oxide, Dispersion in Water.....	317
in Rubber Latex, Compounding of.....	690

1  
4  
9  
1  
1  
1  
8  
3  
5  
3  
2  
7  
2  
4  
5  
0  
4  
5  
9  
1  
3  
1  
8  
3  
4  
9  
0  
4  
3  
9  
5  
3  
1  
1  
1  
9  
4

100